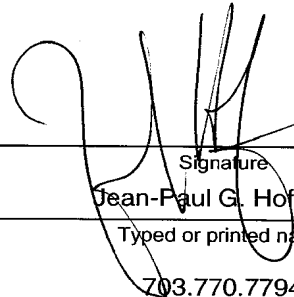


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PRE-APPEAL BRIEF REQUEST FOR REVIEW		Docket Number (Optional)	
<p>I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]</p> <p>on _____</p> <p>Signature _____</p> <p>Typed or printed name _____</p>		Application Number	Filed
		10/562,211	December 7, 2006
		First Named Inventor	
		Dirk-Jan Bijovet, et al.	
		Art Unit	Examiner
		2881	Brook J. Purinton
<p>Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.</p> <p>This request is being filed with a notice of appeal.</p> <p>The review is requested for the reason(s) stated on the attached sheet(s). Note: No more than five (5) pages may be provided.</p>			
<p>I am the</p> <p><input type="checkbox"/> applicant/inventor.</p> <p><input type="checkbox"/> assignee of record of the entire interest. See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed. (Form PTO/SB/96)</p> <p><input checked="" type="checkbox"/> attorney or agent of record. Registration number <u>42,663</u></p> <p><input type="checkbox"/> attorney or agent acting under 37 CFR 1.34. Registration number if acting under 37 CFR 1.34 _____</p>		<p> Signature <u>Jean-Paul G. Hoffman</u> Typed or printed name <u>703.770.7794</u> Telephone number <u>August 22, 2011</u> Date</p>	
<p>NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.</p>			
<p><input checked="" type="checkbox"/> *Total of <u>1</u> forms are submitted.</p>			

This collection of information is required by 35 U.S.C. 132. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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ATTACHMENT SHEETS TO PRE-APPEAL BRIEF CONFERENCE REQUEST

In response to the Final Office Action dated April 22, 2011 ("Office Action") and the Advisory Action dated August 12, 2011 ("Advisory Action"), Appellant hereby requests that a panel of examiners formally review the legal and factual basis of the rejections, for the reasons below, in the above-identified application prior to the filing of an appeal brief.

APPEALED REJECTIONS

Appellant traverses and appeals the rejection of claims 1 and 24 under 35 U.S.C. §112, first paragraph, of claims 1, 3-6, 10, 11, 14, 22-24, 26-29, 33 and 34 under 35 U.S.C. §103(a) in view of Sato, Iwamoto, and Kinoshita, of claims 16, 18, 20, 21 and 39 under 35 U.S.C. §103(a) in view of Sato, Sakamoto and Hirayanagi, and of dependent claims 7-9, 12-15, 19, 30-32 and 35-38 under 35 U.S.C. §103(a).¹

ARGUMENTS FOR TRAVERSAL

112 Rejection

The Office Action asserts there is no support for "second force in the negative first direction at the second end of the second side." Applicant disagrees and refers to, for example, paragraph [0041] and Figure 5 where it is described that "[f]or mass M2 [in Figure 5], this results in a transverse force FA2 that is oriented upwards... For mass M1, however, the transverse force FA1 is oriented downwards..." Thus, the application describes a second force, e.g., force FA2, in the negative first direction, e.g. upwards, at the second end of the second side.

The Advisory Action contends that force FA2 "doesn't create a second force on the patterning device" and relies on an excerpt of paragraph [0041]. However, the excerpt states that "force FA2 does not contribute to an additional clamping force" (emphasis added). It is readily apparent that force FA2 as shown in Figure 5 does not create a clamping force when it is directed in the upward direction as shown. That doesn't mean the force FA2 may not "create a second force on the patterning device"; to the contrary, a second force, e.g., force FA2, in the negative first direction, e.g. upwards, at the second end of the second side is described.

Claims 1 and 24

As acknowledged in the Office Action, the cited portions of Sato fail to disclose or teach the recited dynamic varying of the second force during motion of the patterning device in an automatic

¹ Applicant's understanding is that the rejection of claims 1 and 24 under 35 U.S.C. §112, second paragraph as being indefinite has been withdrawn.

fashion depending on a magnitude of motion of the patterning device and fail to disclose or teach a clamping device configured to apply, when there is an acceleration in the second direction, the second force in a positive first direction at the first end of the second side and no second force or second force in a negative first direction at the second end of the second side.

The cited portions of Iwamoto and Kinoshita do not appear to address all of the deficiencies of the cited portions of Sato.

For example, the cited portions of Iwamoto fail to provide any teaching of applying a second force normal to the direction of the acceleration, let alone any teaching of dynamically varying such a force normal to the direction of the acceleration during motion of the patterning device in an automatic fashion. Rather, the cited portions of Iwamoto appear to be directed to applying a force parallel to the direction of the acceleration. Thus a person of mere ordinary skill in the art would not even be directed to, let alone take any relevant guidance from, the cited portions of Iwamoto in the context of Applicant's claimed invention. The cited portions of Iwamoto are directed to an entirely different apparatus and concept involving applying forces in parallel to the plane of the substrate 101; in contrast, claim 1 is directed to perpendicular forces.

Indeed, Iwamoto appears to teach away from the cited portions of Sato. Iwamoto teaches to apply a force to a perpendicular side of the substrate in a direction parallel to the direction of the acceleration of the substrate. This contrasts with application with a force on opposite sides of the substrate in Sato and perpendicular to the direction of the acceleration of the substrate.

Even if the teachings of Iwamoto were properly combinable into the Sato arrangement (which Applicant does not concede), the cited portions of Iwamoto appear to teach away from the recited clamping device. The cited portions of Iwamoto appear to be directed to an arrangement where the parallel force applied by the counter mass 102 occurs along the center line of the substrate 101 thus not creating a moment about the center of the substrate 101. In contrast, the recited clamping device applies a torque of the patterning device by virtue of the differing application of the normal second forces on opposite ends as claimed.

Moreover, the predictable use of Iwamoto in the Sato arrangement would be to provide the lever, hinge and counter mass of Sato to apply a force to a side of the mask in Sato in a direction parallel to the acceleration of the mask in Sato. There is no indication in Iwamoto of dynamically varying a force normal to the direction of the acceleration during motion of the patterning device in an automatic fashion or of doing so in Sato.

Even if the cited portions of Iwamoto teach such automation (which Applicant denies), the Office Action admits that the cited portions of Iwamoto fail to teach the recited differing application of forces. The Office Action asserts that "Kinoshita et al. teach wherein a wafer vacuum chucking method with two separate vacuum clamping devices are connected to two different holes for

independent exhaustion (Figure 22, part 209a, 209b and Col. 25, lines 30-42).” Respectfully, Applicant submits that the cited portions of Kinoshita have no particular relevance.

First, the cited portions of Kinoshita are directed to a wafer that is chemically processed. This has no bearing on a patterning device as claimed.

Further, the cited portions of Kinoshita are directed to applying a clamping force on only one side. Thus, the cited portions of Kinoshita have no particular teaching regarding application of forces on two sides as claimed and thus no bearing to the cited portions of Sato and Iwamoto.

And, most tellingly, there appears to be nothing about the recited differing application of forces. Even if there are two “independently” controlled spaces 209a, 209b in Kinoshita, that most certainly doesn’t disclose that the spaces 209a, 209b apply different forces (e.g., exterior space 209a may be independently controlled from interior space 209b to allow a smaller wafer 1 than shown to be held by only space 209b). And, even if it did, there is no teaching to have, for example, space 209a apply a suction force (e.g., a second force in a positive first direction) and to have space 209b apply no force or a repelling force (e.g., no second force or second force in a negative first direction). On the contrary, the cited portions of Kinoshita appear merely to teach both spaces 209a, 209b applying only a suction force and thus fail to teach claim 1.

For similar reasons, Applicant submits that the cited portions of Sato, Kinoshita and Iwamoto fail to disclose or teach claim 24. Claims 3-6, 10, 11, 14, 22, 23, 26-29, 33 and 34 are allowable by virtue of their dependency, as well as for the features they recite individually.

Claims 16 and 39

Applicant submits, as acknowledged in the Office Action, that the cited portions of Sato fail to disclose or teach a clamping device which is releasably attached to a surface of the support extending substantially perpendicularly to the first side of the patterning device and facing towards the patterning device, the clamping device arranged to subject the second side of the patterning device to an additional clamping force, at least when the support is accelerated, as in claim 16.

The cited portions of Hirayanagi and Sakamoto do not appear to address all of the deficiencies of the cited portions of Sato.

For example, there does not appear to be any such recited surface extending substantially perpendicularly to the first side of the patterning device and facing towards the patterning device in Figure 6(b) of Hirayanagi. The Office Action asserts that “the clamps could just as well be attached to the outside edge of a mask holder, known in the art, such as that depicted in Hirayanagi (the edge that phrase 40b’s line actually ends on) as the inside surface (that part 45 is sitting on).” However, even if this assertion were correct (which Applicant denies), it would still not teach claim 16. First of all, the relied on side surface of lower portion 40b does not face the mask 41 and thus

fails to teach a surface of the support extending substantially perpendicularly to the first side of the patterning device and facing towards the patterning device (to which the clamping device which is releasably attached). Further, the cited portions of Hirayanagi merely reinforce the arrangement depicted in the cited portions of Sato – a device attached to a surface parallel to the recited first side of the patterning device, rather than perpendicular.

Hirayanagi also appears to teach away. In particular, Hirayanagi appears to indicate that one should use the clamps 45 in the circumstance where the mask cannot be held via its bottom surface. See, e.g., Hirayanagi, col. 4, lines 38-42 (discussing, in relation to Figure 1, a mask that cannot be held by electrostatic attraction via its bottom surface) and col. 4, lines 56-65 (discussing a solution involving clamping the mask from the top side). Thus, Hirayanagi would teach away from subjecting the first side of the patterning device to at least one first force, and subjecting the second side of the patterning device to at least one second force. To Hirayanagi, it is one or the other – a clamping force on a first side or a clamping force on another side.

The Office Action further relies on Sakamoto. But like the cited portions of Sato and Hirayanagi, the cited portions of Sakamoto fail to disclose or otherwise render obvious a clamping device which is releasably attached to a surface of the support extending substantially perpendicularly to the first side of the patterning device and facing towards the patterning device. On the contrary, it appears to teach away. The cited portions of Sakamoto merely reinforce the arrangements depicted in the cited portions of Sato and Hirayanagi – a device attached to a surface parallel to the recited first side of the patterning device, rather than perpendicular.

The Office Action further states that “[i]t would have been an obvious matter of design choice to adjust the clamp location, since applicant has not disclosed that the location solves any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the clamp on the side and facing the mask.” Applicant respectfully disagrees.

For example, paragraphs [0044] and [0045] of the specification disclose that “[a]s shown in Fig. 7, the clamping device CD may also be provided with vacuum tubes VT2. In this embodiment a very stiff construction can be obtained for maintaining the position of the clamping device and the patterning device MA when the support MT is accelerated. In this embodiment the patterning device MA is fixedly attached by vacuum suction to the clamping device CD, which is held against upstanding edges UP of the support. Fig. 8 shows another embodiment of a support MT according to the invention. In this example, a vacuum tube VT3 extends through the upright parts UP of the support MT to which the clamping device CD abuts when obtaining the additional contact area ACA. When vacuum is applied to vacuum tube VT3 the clamping device will be sucked against the support MT, thus increasing force F3 to stabilize the clamping device CD in the support MT.” Thus, it clearly provides that the location thus “solves [a] stated problem” and is “for [a] particular

purpose." Particularly, the particular arrangement can reduce or prevent slippage, provide a stiff construction and/or provide improved stability.

Moreover, "design choice" is not a ground for rejection under 35 U.S.C. §103. As stated in the specification, a clamping device which is releasably attached to a surface of the support extending substantially perpendicularly to the first side of the patterning device and facing towards the patterning device have one or more advantages and does not present a mere "design choice." Design choices are discussed in the Manual of Patent Examining Procedure (MPEP) §2144.04(VI)(C), but only insofar that they constitute a rearrangement of parts. Applicant's claim cannot represent a "rearrangement of parts," because the cited references fail to disclose all of the parts disclosed in Applicant's claims. Moreover, the Office Action fails to cite any legal authority to support the "design choice" rejection and the Office Action appears to be applying a per se rule to reject the claim under obviousness contrary to legal precedent.

For similar reasons, Applicant submits that the cited portions of Sato, Sakamoto and Hirayanagi fail to disclose or teach claim 39. Claims 18, 20, and 21 are allowable by virtue of their dependency, as well as for the features they recite individually.

Claims 7-9, 12-15, 19, 30-32 and 35-38

Further, the Office Action and the Advisory Action have not shown that the cited portions of Araki, Meinel, and Hirayanagi teach, and Applicant submits that the cited portions of Araki, Meinel, and Hirayanagi do not teach, the deficiencies of Sato, Iwamoto, Kinoshita with respect to claims 1 and 24. Further, the Office Action and the Advisory Action have not shown that the cited portions of Meinel teach, and Applicant submits that the cited portions of Meinel do not teach, the deficiencies of Sato, Sakamoto and Hirayanagi with respect to claim 16. So, claims 7-9, 12-15, 19, 30-32 and 35-38 are patentable by virtue of their dependency, as well as for the features recited therein.

CONCLUSION

Therefore, it is respectfully requested that the panel return a decision concurring with Appellant's position and eliminating the need to file an appeal brief.

Respectfully submitted,
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